

REC'D 07 JUN 2005

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PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

Bjerkéns Patentbyrå KB
Östermalsgatan 58
114 50 Stockholm
Sverige

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Date of mailing
(day/month/year)

03 -06- 2005

Applicant's or agent's file reference

56034 PCT sb/bl

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/SE2005/000317

International filing date (day/month/year)

03.03.2005

Priority date (day/month/year)

12.03.2004

International Patent Classification (IPC) or both national classification and IPC

F28F3/08, F28F13/08 // F28F13/06

Applicant

Alfa Laval Corporate AB et al

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further opinions, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/SE
Patent- och registreringsverket
Box 5055
S-102 42 STOCKHOLM

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Authorized officer

Annette Riedel / JA A

Telephone No. +46 8 782 25 00

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/SE2005/000317

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language, _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/SE2005/000317

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-26</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-26</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-26</u>	YES
	Claims		NO

2. Citations and explanations:

The invention relates to a plate heat exchanger with tapering interspaces, as well as to a suitable heat exchanger plate.

Documents cited in the International Search Report:

D1: GB2054817 A
D2: SE415928 B
D3: SE514326B C2
D4: JP6241672 A
D5: JP7260385 A
D6: SE470339 B
D7: WO8502670 A1
D8: GB1357282 A
D9: US4781248 A
D10: US4749032 A
D11: GB1468514 A

The cited documents represent the general state of the art only. The invention defined in claims 1-26 is not disclosed by any of these documents, nor does the cited prior art give any indication that would lead a person skilled in the art to the claimed heat exchanger and plate. Therefore, the claimed invention is not obvious to a person skilled in the art.

Hence, the invention defined in claims 1-26 is novel and considered to involve an inventive step. The industrial applicability of the invention is evident.

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WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/SE2005/000317

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1-26	YES
	Claims		NO
Inventive step (IS)	Claims	1-26	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-26	YES
	Claims		NO

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